AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A phase shifter element arranged to selectively vary the effective dielectric constant of a section of transmission line thereby changing the propagation velocity of said transmission line and varying the phase of signals of desired frequencies or frequency range passing through said transmission line, said phase shifter element comprising a movable planar dielectric member of predetermined dielectric constant adjacent said transmission line, said planar dielectric member being provided with three or more discrete interactive dielectric segments extending from at least one edge thereof to moveably overlap said transmission line, wherein dimensions of each said interactive segment and widths of gaps defined by opposite edges of adjacent segments are determined by computer optimisation means, such that the aggregate reflection of said signals passing through said transmission line is minimised,

wherein at least two of said interactive segments are shaped differently from one another.

2. (original) A phase shifter element as claimed in claim 1, wherein said gaps are air gaps.

3. (previously presented): A phase shifter element as claimed in claim 1, wherein said gaps are at least partly filled by material whose dielectric constant is different to that of a dielectric constant of said dielectric segments.

4. (previously presented): A phase shifter element as claimed in claim 1, wherein said gaps are at least partly filed by the same material as that of the dielectric segments, and wherein the thickness of the filing is less than the thickness of said segments.

5. (previously presented): A phase shifter element as claimed in claim 1, wherein said optimisation means comprises a radio frequency analysis and optimisation computer program to calculate data for controlling cutting equipment means to produce said dielectric segments having optimum dimensions and optimum widths there between.

6. (previously presented): A phase shifter element as claimed in claim 1, wherein said planar dielectric member comprises a rectangular body section, said dielectric segments extending from a major side thereof, and wherein the segments and the body section lie in the same plane.

7 (previously presented): A phase shifter element as claimed in claim 1, wherein said transmission line is operatively associated with an antenna array.

8. (original): A phase shifter as claimed in claim 7, wherein said transmission line comprises a conductive track of predetermined electrical length supported on planar dielectric

circuit board, said circuit board being mounted in a spaced relationship with a ground plane member.

9. (original): A phase shifter as claimed in claim 8, wherein said movable dielectric member is interposed between said dielectric circuit board and said ground plane member.

10. (original): A phase shifter as claimed in claim 8, wherein said movable dielectric member is disposed above said dielectric circuit board and remote from said ground plane member.

11. (previously presented): A phase shifter as claimed in claim 8, including adjustment means for selectively moving said dielectric element in relation to said transmission line such that said segments and said gaps movably overlap said transmission line to vary the phase of signals passing through said transmission line.

12. (original): A phase shifter as claimed in claim 11, wherein said adjustment means includes a remotely controllable servomechanism.

13. (previously presented): An antenna array incorporating a phase shifter as claimed in claim 1.

14. (original): An antenna array as claimed in claim 13, arranged as a multiple-band antenna array.

15. (canceled).

16. (previously presented): A phase shifter element as claimed in claim 1, wherein all of said interactive dielectric segments are of different shapes from one another.

17. (previously presented): A phase shifter element as claimed in claim 1, wherein said gaps are of different shapes from one another.

18. (previously presented): A phase shifter element as claimed in claim 1, wherein the interactive dielectric segments each have leading and trailing edge surfaces along a direction of said transmission line such that at least one of the leading and trailing edge surfaces of at least one interactive dielectric segment is nonlinear.

19. (previously presented): The phase shifter element of claim 1, wherein leading and trailing edge surfaces of plural interactive dielectric segments are nonlinear.

20. (currently amended): A multi-band antenna system comprising:

a multi-band antenna comprising one or more radiating elements;

a conductive ground plane;

a distribution element comprising a planar dielectric circuit board and conductive tracks, said planar dielectric circuit board and said conductive tracks ~~which form~~forming a transmission

line network for splitting a signal applied to a signal input terminal into a plurality of paths that terminate at respective one or more radiating elements;

a movable planar dielectric element comprising a body and three or more discrete interactive dielectric segments extending from at least one edge of said body, wherein said movable planar dielectric element movably overlaps said transmission line network so that an aggregate reflection of signal passing through said transmission line network is minimized

wherein at least two of said interactive segments are shaped differently from one another.

21. (previously presented): The multi-band antenna system of claim 20, wherein the movable dielectric element is supported in a linear slidable manner by two parallel rods attached to the conductive ground plane.

22. (previously presented): The multi-band antenna system of claim 21, wherein the movable dielectric element further comprises an adjustable means that includes a remotely controllable servomechanism.